MEDICAL SYMBOLISM
IN BOOKS OF THE RENAISSANCE AND BAROQUE

Cover illustration: Detail from a plate in Johann Daniel Mylius' *Opus medico chymicum. . . Tractatus III; seu, Basilica philosophica . . .* (1618) representing the Garden of Alchemy fully planted with trees of the seven metals. The double-bodied lion is a symbol of the blending of the "two sulphurs" and the surmounting figure is possibly the "Elder" of alchemical literature. (Catalog No. 35).

MEDICAL SYMBOLISM
IN BOOKS OF THE RENAISSANCE AND BAROQUE

An Exhibit

in the
National Library of Medicine

•

June 23 - September 30, 1966

U S DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

CONTENTS

		Items	Pages
	Introduction		
I.	Greek and Roman Gods	1-9	1-3
II.	Hermes and the Caduceus	10-13	4-5
III.	Saints	14-17	5-7
IV.	Astrology	18-24	8-10
V.	Alchemy	25-35	11-16
VI.	Animals and Objects	36-43	16-18
VII.	The Tools of Medicine	44-57	18-22

INTRODUCTION

Throughout history, changing views as to the causes of death have changed the role of the sick in society. Some primitive tribes simply abandoned the sick person, so that he was dead socially before his physical life had ended. In other societies the sick have been considered victims of evil spirits. In archaic civilizations the deity was believed to inflict illness as a punishment for sin. The Unknown, the Supernatural, was thus involved in healing.

The name of the Egyptian god "Imhotep" is one of the earliest known medical symbols. Skill in healing was an attribute of many Greek and Roman gods. Chief of the Greek pantheon in this respect was Aesculapius, whose staff remains today a symbol of medicine. Under the influence of Christianity, the staff was transferred from the hand of Aesculapius to that of Saint Antonius, where it appeared in the form of a cross.

Medical thinking during the Middle Ages and at the beginning of the Renaissance was still dominated by Hellenic philosophy and Galenism. Uncritical acceptance of past authority, corrupt texts, and a reluctance to experiment led to fantastic ideas. The early Renaissance scholar Agrippa von Nettesheim, for example, basing his opinion on writings of the ancients, said that fire shelters crickets and salamanders. A simple experiment would have proved that salamanders die in fire, but Agrippa shared with the philosophers of the Middle Ages an aversion to experimentation.

In the fifteenth century, the revival of classical learning resulted in the new humanistic outlook of the Renaissance. Classical medical texts were published only to be, inevitably, superseded. In the sixteenth century, Vesalius contradicted Galen and created modern anatomy. More dramatically, Paracelsus, a contemporary of Vesalius, publicly burned Galen's works to demonstrate his renunciation of the authority of the past. However, although Paracelsus professed to believe that nature was the highest authority, he was in fact more poet than scientist. He or his followers revived many ideas of antiquity. His teachings stimulated the imagination of others to seek the meaning of the world and of man and thus the nature of health and disease through knowledge of the deity rather than through examination of sense data in the manner of modern science.

In the Renaissance and early baroque periods, classical mythology, Christian saints, and Paracelsian views provided the bases of much medical symbolism. This exhibition offers a view of selected symbols appearing in medical books and prints in the Library's collection and suggests some of the ways in which these symbols have been interpreted.

Peter Krivatsy
History of Medicine Division

ENCHEIRIDIVM
ANATOMICVM
ET PATHOLOGICVM
adornatum a
IOANNE RIOLANO FILIO.
Cum Figuris.
Ioh.
Riol.
Veiling.
A. Valcob.
G. Patin.
A. Kyper.
LVGDVNI BATAVOR.
Ex Officinâ Adriani Wyngaerden. A.° 1649.

No. 2.

I. GREEK AND ROMAN GODS

In the belief that illness was sent as divine punishment or caused by evil spirits, sick men in antiquity implored the assistance of the gods. Aesculapius was supposed to be the most helpful and became the symbol of medicine.

1. Benedetti, Alessandro, d. 1512. Habes lector studiose hoc volumine... Singulis corporum morbis ... remedia ... Venice, 1533.

   The illustrations tell the story of Aesculapius. The son of Apollo and Coronis, a mortal, he was snatched from his mother's womb when the jealous Apollo slew her for being unfaithful. Apollo then took Aesculapius for schooling to the centaur Chiron, a famous physician. Aesculapius soon surpassed his teacher in healing: his patients never died. For bringing Hippolytus back from the dead, Zeus slew Aesculapius with a thunderbolt. When Apollo interceded for his son, Zeus, relenting, elevated Aesculapius to the stars. Thus he became the Greek god of medicine.

2. Riolan, Jean, 1580-1657. Encheiridium anatomicum et pathologicum ... Leyden, 1649.

   In this fine engraving by Renier Persyn are two stylized symbols of medicine based on Aesculapius and Hygeia, daughter of Aesculapius and goddess of health. They are shown dressed in heavy silk and velvet in the baroque manner, surrounded by animals and birds often portrayed in connection with medicine. Both hold the staff with the serpent. This is unusual for Hygeia, who is usually portrayed only with the serpent.

3. Pharmacopoea Amstelredamensis ... Leyden, 1701.

1701 No. 3.

In this engraving by Coenraet Decker, Hygeia is seated at a table in a pharmacy. Her father Aesculapius stands behind her, and Pan, as the god of forests, offers a basket of medicinal herbs.

4. Remmelin, Johann, 1583-1632. Catoptrum microcosmicum, suis aere incisis visionibus splendens, cum historia, & pinace, de novo prodit ... Augsburg, 1619.

The most important symbol on this luxurious Baroque title page is the snake. There are many tales of its curing power. The snake symbolizes, in Epidaurian and other records, the turn toward recovery at the brink of the underworld. Serpents appeared frequently in Aesculapian temples and were considered helpers of Aesculapius in his work.

5. Aesculapius and Telesphorus. Engraved by Nicolas Dorigny (1652-1746)

On this engraving, next to the ideal symbol of Aesculapius and the knotted staff with a single serpent coiled around it, is the small figure of Telesphorus, called also Eumerion or Acesius. Not Aesculapius's son, as is sometimes stated, the youth is usually depicted wrapped in a mantle and barefoot. Perhaps the priests attached him to Aesculapius to suggest the silence and secrecy which must be observed in medical practice. Sometimes he was called Sigalos (Silent), and physicians swore by him to hold inviolate the secrets of their profession.

6. L'Obel, Matthias de, 1538-1616. Kruydtboeck oft beschrÿvinghe van allerleye ghewassen, kruyderen, hesteren, ende gheboomten ... Antwerp, 1581.

To the left of the altar, with four horns, stands Apollo Sauroctonus, as lizard killer. Apollo was the first Greek god to find a place in Roman

religion; he was worshiped chiefly as a god of healing, his character as sun god having only a literary vogue. In addition to Apollo the Romans also wanted Aesculapius. According to Ovid, Aesculapius arrived at the mouth of the Tiber in the form of a snake where he dwelt in one of Apollo's temples. Aesculapius with Telesphorus are seen to the right of the altar.

7. Philippes, Jean, d. 1622. De l'excellence de l'homme et de sa naissance ... Paris, 1603.

Artemis, identified by the Romans with Diana, is typically the virgin huntress. She is associated with the moon as her twin brother Apollo is associated with the sun. Possessing the gifts of health and strength, she averted evil and alleviated the sufferings of humanity. Yet her arrows sent plagues among men and caused mental and nervous disorders. Sudden and untimely deaths, especially among women, were ascribed to her, and women afflicted with certain diseases were called "moon" or "Artemis-struck."

8. Leeuwenhoek, Anthony van, 1632-1723. Arcana naturae ... Leyden, 1696.

The engraved title page of this work presents the usual figure of the Ephesian Artemis as a female with many breasts, the symbol of productivity, childbirth, matrimony, and her function as the all nourishing mother. She is usually symbolized seated or standing before a summer-house or flowering bushes.

9. Abū Ma^{c}shar, 805 or 6-886. Albumasar De magnis conjunctionibus ... tractatus. Venice, 1515.

An interesting survival of the ancient bond between astrology and medicine is the sign of Jupiter ♃ which is thought to be the origin of the sign with which every modern prescription begins. It was believed that placing this symbol on a prescription would favorably influence the disease. According to some sources the symbol can be traced to Zadakiel and Horus.

II. HERMES AND THE CADUCEUS

Since the sixteenth century, Hermes (or Mercury) and his caduceus have often been used as medical symbols. A distant relative of Aesculapius and sometimes considered the god of science and invention, Hermes was also interested in astrology and alchemy. These presumably are the reasons for the confusion of his symbol and the only "true" symbol of medicine - the knotted staff of Aesculapius with a single serpent coiled around it.

10. Engel, Johann. Astrolabium ... Augsburg, 1488.

    This 15th century picture depicts the staff with two serpents intertwined in symmetrical fashion. It is the magic wand of Mercury, messenger of the gods and patron of trade.

No. 10.

11. Aetius, of Amida. Aetii Amideni quem alii Antiochenum vocant ... libri XVI ... Basel, 1533-35.

    Froben, famous sixteenth century publisher of classical, scientific, and medical works, elected the caduceus as his printer's mark. Froben's scholarly fame and the large number of works published by him and his family may have helped popularize the belief that the caduceus was a medical symbol.

No. 11.

12. Mattioli, Pietro Andrea, 1500-1577. Les commentaires ... sur les six livres des simples de Pedacius

Dioscoride Anazarbeen ... Lyons, 1566.

Many famous printers of medical books besides Froben have chosen the caduceus, or Hermes with the caduceus, as a printer's mark. One of the finest emblems is Cotier's. Scholars and medical societies also favored the caduceus. The emblem of the medical faculty of the University of Coimbra and the Danzig surgeons' emblem of 1663 included the caduceus. William Harvey's "stemma," erected in 1600 on the wall of the hall at the University of Padua, is very similar to the caduceus.

13. Greenhill, Thomas, 1681-1740. Νεκροκηδεία or, The art of embalming ... London, 1705.

"Reader thou in this Frontispiece may'st see / How mortal Man seeks Immortalitie ..." So reads "The explanation," opposite the frontispiece drawn by Pierre Berchet. "Jove ... Two Messengers sends down the Airy space, / To raise Man's Ashes from the silent Urn, / Which touch'd by Hermes wand resume their pristine Form ..." Here we have the true profession of Hermes as described in the Odyssey where he appears as the messenger of the gods and conductor of the dead to Hades.

III. SAINTS

Christian saints who had once lived and suffered on earth were more real to man than the mythological pagan gods and became important medical symbols.

14. Manuscript license to practice medicine and surgery, Florence, 16 Feb. 1589; from the Doctors and Examiners of Physicians of the City of Florence to Benedetto Guarnacci, of Volterra.

The examiners' seal, showing Mary and the Holy Child, exemplifies the close connection between the city of Florence, and the Vatican. Physicians were required to take their oath on a Bull of Pope Pius V.

15. Gersdorff, Hans von, fl. 1476-1477. Feldtbůch der Wundtartzney. Strassburg, 1517.

Anthony the Great, or Anthony Abbott, often called upon to heal St. Anthony's fire (chiefly ergotism), appears here in a woodcut by Johannes Wechtlin. The T, originally theta, at the top of the staff represents the first letter of the Greek word Theos (God). Antonius'

No. 15.

staff, sometimes shown as a cross, is the Christian form of Aesculapius' staff, symbolizing the power of healing.

16. Guy de Chauliac, 1300-1368. [Cirugia] Seville, not before 1504.

According to legend, Sts. Cosmas and Damian were twin brothers of Arabian birth raised in the Christian faith who devoted their lives to medicine and pharmacy. They are always represented together, usually in the physicians' habit of long red gown and cap. On this title page the patron saints of medicine and pharmacy are represented holding a pillularium and a jar of ointment.

17. Saint Apollonia. Painted by Guido Réni (1575-1642), engraved by B. A. Nicolet (1743-1806)

When many Christians fled persecution in Alexandria, Apollonia stayed behind to comfort the few who remained. As punishment she was bound to a column and her teeth were pulled out. Usually symbolized with palms and a pair of pincers holding a tooth, she is the patron saint of dentists.

No. 16.

IV. ASTROLOGY

In the transition from the Middle Ages to the Renaissance, scholars held the view that God created man from the same elements that made up the universe. Thus the stars and planets influenced health, allying astrology with medicine.

18. Indagine, Joannes ab. Chyromantia ... Utrecht, 1536.

    In the middle section of this hand-colored title page, an astrologer holds the globe. Generally the globe is a symbol of power, but in astrology and medicine it represents knowledge of the nature of the earth and the spheres, and the relationship of the macrocosmos to the microcosmos.

19. Guy de Chauliac, 1300-1368. Le Guidon en francoys ... Paris, 1537.

    Heavenly bodies were believed to influence fortune and health. Each day of the week was named after the strongest planet of that day. Each had its own symbol, which became the symbol of the particular medicine practiced that day.

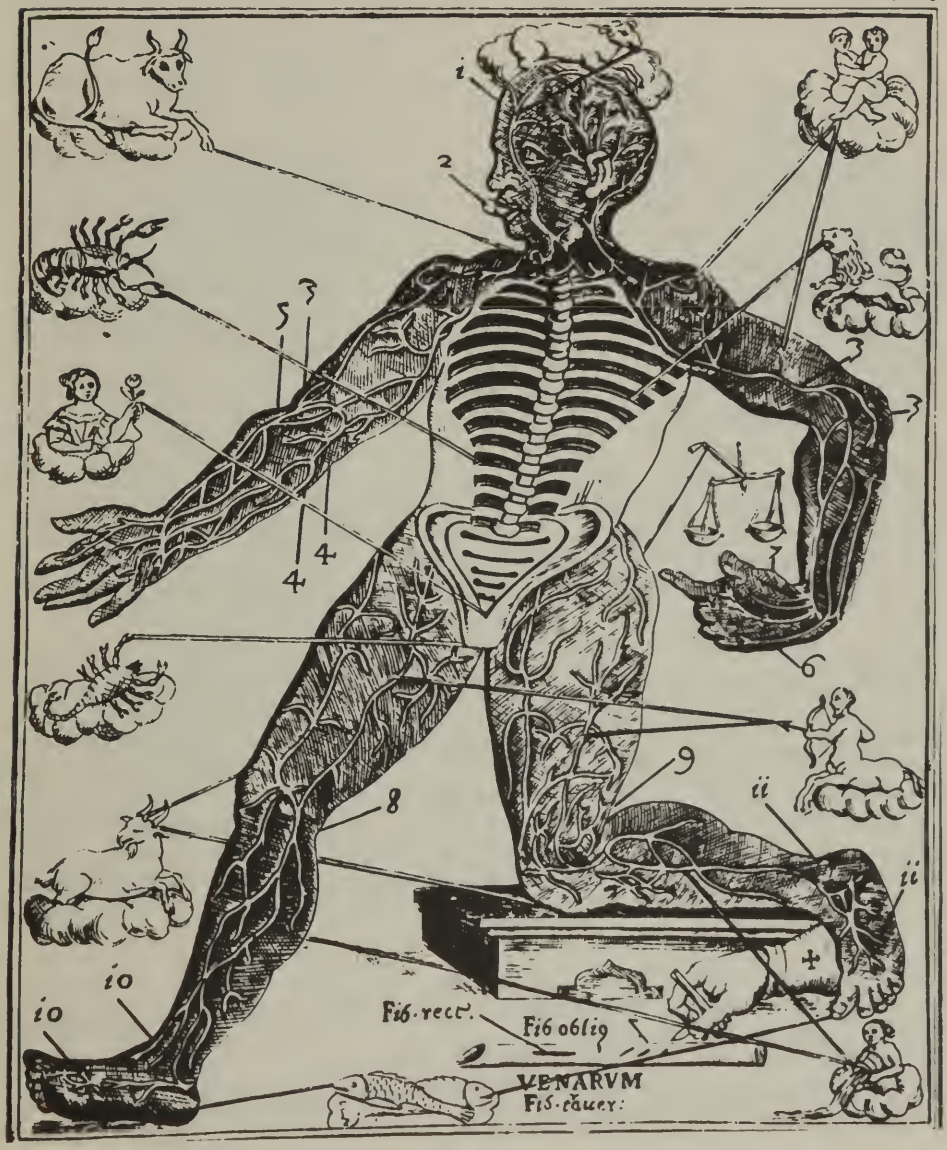
20. Rüff, Jakob, 1500-1558. De conceptu et generatione hominis ... Frankfurt am Main, 1580.

    During the Renaissance, belligerent midwives guarded the lying-in

No. 19.

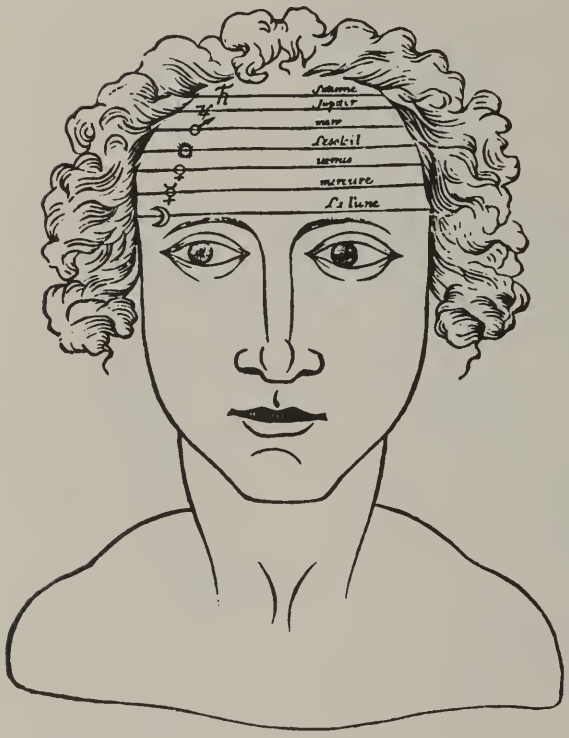
chamber against medical interference. The surgeon was called only when normal birth seemed hopeless. Here the physician-astrologer at the window casts a horoscope of a new arrival. The horoscope, made up at the time of birth, was not only a guide for the physician during the lifetime of the patient but also the symbol of the patient's fortune, abilities, and health.

No. 21.



21. Ricco, Daniel, fl. 1690. Ristretto anotomico; o, Sia aleanza de gl'astri, con l'huomo, e vegetabili ... Venice, 1690?

The Zodiac man or Bloodletting man shows the points at which blood may be let. A phlebotomy table spelled out the relationship of every part of the human body to the signs of the zodiac. Bloodletting was permitted only at specific times for specific parts of the body.



No. 22.

22. Cardano, Girolamo, 1501-1576. Metoposcopia ... Paris, 1658.

For some astrologer-physicians the lines in the forehead had special importance since the forehead is closer to heaven than any other part of man. The illustration at left shows the locations of the planets' zones of influence. The practicing metoposcopist examined the wrinkles and the length of the lines in different zones as a guide in his diagnosis.

23. Culpeper, Nicholas, 1616-1654. Astrologicall judgment of diseases... London, 1655.

Culpeper, a controversial writer on astrology and medicine, is shown in his portraits as an astrologer with the usual symbols, the globe and the tabulation. In his right hand is a "figure of crisis."

24. Culpeper, Nicholas, 1616-1654. Semeiotica Uranica; or, An astrological judgment of diseases ... London, 1651.

On his chart, the "figure of crisis," Culpeper diagrammed the influence of stars on the development of a disease.

V. ALCHEMY

During the Renaissance, scientists turned to experimentation. While some physicians learned more about the human body through dissection, others used the laboratory in an effort to produce a universal medicine. Influenced by many ideas descended from the antiquity, this work led to a mystical alchemy which attempted to comprehend macrocosm and microcosm in an all-embracing whole.

25. Severino, Marco Aurelio, 1580-1656. De efficaci medicina lib. III. ... Frankfurt am Main, 1646.

    The Aristotelian doctrine of four elements (fire, air, earth, water) lent itself to the geometrical symbolism of a four-sided figure. Its pictorial representation was also common. This engraved title page by Matthäus Merian the Elder represents the four elements in personalized form. Each element is also symbolized by an animal and a corresponding humor.

26. Paracelsus, 1493-1541. Portrait engraved by Romeyn de Hooghe (1645-1708)

    Paracelsus holds his healing sword bearing the word AZOTH on its globular head. AZOTH is the alchemical name of mercury, regarded as the first principle of metals. It symbolizes the universal remedy of Paracelsus.

27. Maier, Michael, 1568?-1622. Tripus aureus; hoc est, Tres tractatus chymici selectissimi ... Frankfurt am Main, 1618.

    A representation of Thomas Aquinas forms an apt illustration of early alchemy. It depicts the natural production of metals in the bowels of the earth from exhalations marked with the signs of sulphur and mercury; above, on the crust of the earth, an alchemist attempts to make the same metals artifically.

28. Maier, Michael, 1568?-1622. Secretioris naturae secretorum scrutinium chymicum ... Frankfurt am Main, 1687.

    The Philosopher's Egg or Hermes' Vase played a great part in alchemical writings. Used in the laboratory, it was an oval glass vessel that could be "hermetically" sealed. The egg was regarded by alchemists,

as by ancient civilizations, as a symbol of creation. The Greeks approached still nearer to the alchemical point of view by describing it as a container of the four elements.

29. Manget, Jean Jacques, 1652-1742. Bibliotheca chemica curiosa ... Geneva, 1702.

The first volume of this work has a supplement of fifteen engraved plates, the *Mutus liber, in quo tamen tota philosophia Hermetica, figuris hieroglyphicis depinguntur* ... One of the outstanding enigmas of alchemical literature, it deals in a unique way with the operations performed by the Grand Magistery. The tenth plate shows the decisive operation. Equal weights of two liquids, marked with a star and a flower, possibly symbolizing the proximate materials of the Great Work, are poured into an aludel, which the adept seals hermetically with a blowpipe. The vessel, which has now become the sealed Vase of Hermes, or Philosophic Egg, is placed in the Athanor, beside which stand two figures marked with the signs of Sol and Luna, symbolizing sophic sulphur and sophic mercury. Here in the Furnace of the Sages, the Great Work is consummated.

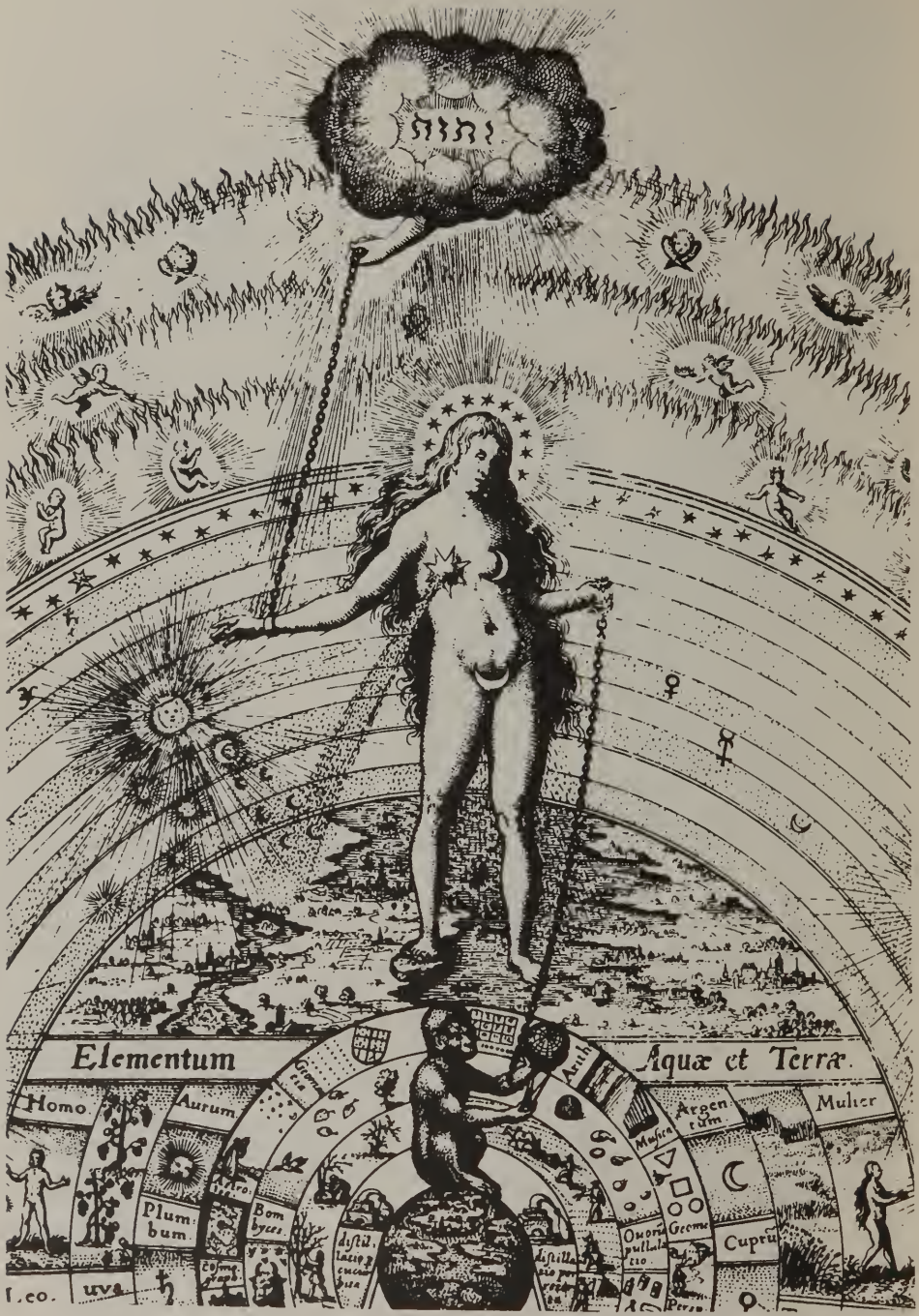
30. Fludd, Robert, 1574-1637. Medicina catholica; seu, Mysticum artis medicandi sacrarium. In tomos divisum duos ... Frankfurt am Main, 1629-1631.

Fludd, a contemporary of William Harvey, was concerned with the significance of the sun. He believed the air to be a super-celestial or invisible life-sustaining fire given us by the sun. The four cardinal winds--illustrated on the title page of *Pulsus; seu, Nova et arcana pulsuum historia,* the last part of volume two of *Medicina catholica*--were inhaled by man. Thus the spirit of life reached the heart and from there was carried around the body in circular motion, imitating the divine circularity.

31. Fludd, Robert, 1574-1637. Medicina catholica; seu, Mysticum artis medicandi sacrarium. In tomos divisum duos ... Frankfurt am Main, 1629-1631.

The title page to the third part of the first voume bears a fine Rosicrucian allegory. The rose, the cobweb, and the beehive represent the secret society, whose aims were the spiritual reformation of the world and free care for the sick.

No. 26


Elementum
Aquæ et Terræ.
Homo.
Aurum.
Plum: bum.
Bom byces.
Arith.
Musica
Argen tum.
Mulier
Cupru
Leo.
uva

32. Fludd, Robert, 1574-1637. Utriusque cosmi majoris scilicet et minoris metaphysica, physica atque technica historia ... Oppenheim, 1617-1621.

The engraving shows the World Soul still retaining some of the characteristics of the ancient Isis - flowing hair, a half moon on her womb, one foot in the water, the other on land. Following Plutarch's ideas, magicians discovered in the god-mother of antiquity an occult allegory, that of the World Soul, which nurtures the entire creation at God's behest. Cast out of the Christian heaven, she continues to sow the essence of life on earth and among the stars. "She is the feminine part of nature, or that property which renders her a suitable subject for the production of all other beings." She is shown chained to God, according to Plutarch's saying: "Isis always partakes of the Supreme." And man (the ape of God) is chained to her, to indicate that he owes his life to the seed that flows from her breast.

33. Basilius Valentinus. Tractatus ... de rebus naturalibus & supernaturalibus ... Frankfurt am Main, 1676.

The rising sun was an important symbol to the alchemists, but its origin as a symbol goes far back into antiquity. The rising sun was the great nature symbol of that mysterious divine principle that the Asklepiads of Kos revered in their family cult. The rising sun symbolized the inner clarity of knowledge which must accompany the power to help. The divine physician Asklepios, who combined light and helpfulness in his person, is the ancestor and prototype of all mortal physicians.

34. Croll, Oswald, 1580-1609. Basilica chymica ... Frankfurt am Main, 1609.

On this title page is Hermes Trismegistus' ideal symbol. Hermes Trismegistus is a late name of Hermes, as identified with the Egyptian god Thoth. He was the legendary author of a large number of works, called *Hermetic books*. These include philosophical treatises, such as the *Corpus Hermeticum* and the *Asclepius*, as well as writings on astrology, alchemy, and magic. The Paracelsian triangle represents sulphur, mercury and salt.

35. Mylius, Johann Daniel. Opus medico chymicum ... Tractatus III; seu, Basilica philosophica ... Frankfurt am Main, 1618-1620.

Here is a striking symbolical representation of the relationship of the alchemical microcosm to the macrocosm in a pictorial representation of the place of alchemy in the universe. First is shown the celestial world, with the Tetragrammaton, or Name of the Lord, surrounded by

angels. Next appears the planetary and zodiacal world followed by the terrestrial world, in the center of which appears the Garden of Alchemy, planted with trees of the seven metals. Man, on the lower left, carries the symbol of Sol, or sophic sulphur, the masculine principle. On the right is woman with the symbol of Luna, or sophic mercury, the feminine principle. The woman stands in the Hermetic stream and holds a bunch of grapes in her right hand to signify fertility. Both these principles take part in the alchemical operation, and are linked to the macrocosm by chains. At the bottom of the picture, the phoenix (left) is associated with two globes symbolizing fire and air, and the eagle (right) with two globes representing water and earth. The double-bodied lion is a symbol of the blending of the "two sulphurs" and the surmounting figure is possibly the Elder.

VI. ANIMALS AND OBJECTS

Animals as well as common inanimate objects have been used as symbols. Shown here are some as they appear in relation to medical works, as well as personifications of human emotions or characteristics.

36. Simon Genuensis. Synonyma medicinae; sive, Clavis sanationis. Milan, 1473.

    The two hand-painted storks are symbols of prudence and vigilance, piety and chastity. The stork was associated with the Annunciation. It perhaps derived from this association its use as a medical symbol, announcing the healing of man.

37. Dioscorides, Pedanius, of Anazarbos. ... Virtutum simplicium medicinarum liber ... Lyons, 1512.

In Dioscorides' "Prologus" the illuminator painted among the ornaments some symbols frequently used in medicine: the butterfly, which signified the restoration of health; the strawberry, the symbol of the righteous man whose fruits are good works; birds, to suggest the spiritual, as opposed to the material.

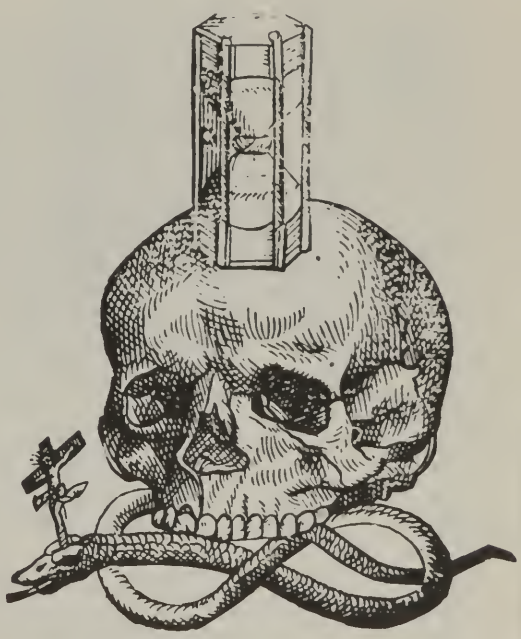
38. Fabricius von Hilden, Wilhelm, 1560-1634. Opera quae extant omnia ... Frankfurt am Main, 1646.

The rich allegorical presentation at the top of the title page indicates clearly that God is the origin of medicine. Except for the serpent, the cock is the most important medical symbol on this page. Grateful patients often sacrificed cocks to the healing gods, particularly to Aesculapius. One of Socrates' last statements was: "Crito, I owe a cock to Aesculapius; will you remember to repay the debt?"

39. Medicae artis principes, post Hippocratem & Galenum ... Geneva, 1567.

The tree, shown here in the printer's mark of Henri Estienne, has played an important part in medical symbolism. In general, the tree is a symbol of either life or death, depending upon whether it is healthy and strong, or poorly nourished and withered. According to myth, each main has a tree, symbolizing his life.

40. Alberti, Salomon, 1540-1600. Historia plerarunque partium humani corporis. Wittenberg, 1585.



All four symbols on this title page are basically religious but were often used in medicine. The hourglass is the symbol of the flight of time, the skull of death. The serpent and the cross in this case mean the same: revival or resurrection.

41. Jessen, Johann von, 1566–1621. Portrait engraved by Lucas Kilian (1579–1637) after H. O. Kleine.

The candle was often used on physicians' portraits to represent their self-consuming service to their patients. The motto "Officio mi officio" on the winding ribbon around the candle expresses this thought.

42. Senault, Jean François, 1601–1672. De l'usage des passions ... Paris, 1669.

On the engraved title page each passion is personified. Hatred, Hope, Desire, Anger, Sorrow, Joy and Fear are among those depicted. Reason, however, holds the emotions enchained. Seated in her royal throne, she is unquestioned ruler of the mind. As the first of the emotions, Love occupies a central position on the page. Bound by love, as St. Augustine said, emotions could lead to both reason and wisdom.

No. 43.

43. De verbeterde Haarlemmer apotheek ... vermeerdert door Abraham Bogaert ... Haarlem, 1714.

This title page combines Greek mythology, ancient mysticism, and the personification of vices. The pentagram, a symbol against demons, surmounts the head of Hygeia who holds Foolishness, Avarice and Indigence enchained. The "thousand eyes" are symbolically represented on her breast.

VII. THE TOOLS OF MEDICINE

Objects associated with a group often have come to symbolize it, as seen here with various health professions. Thus the urine flask became the symbol of medicine, the seeing hand of surgery, and the cedar cone of pharmacy.

44. Ketham, Joannes de, 15th cent. Queste sono le cose contenute in questo dignissimo Fasciculo di medicina vulgare ... Milano, 1509.

The fifteenth-century physician relied heavily on the appearance of a patient's urine in determining the nature of his malady. If the urine was red and thick, the patient was sanguineous. If it was red and thin, he was in a state of chronic anger. Urines varied greatly in color from purple, to green, blue, and black. The possible appearances were tabulated, coordinated, and depicted in the form of a circular diagram, known as the urine ring, which became the symbol of uroscopy. In the Italian translation of Ketham's *Fasciculus medicine* we have a fine hand-colored illustration of the urine ring.

45. Avicenna, 980?-1037. Ugo super quarta primi ... Venice, 1517.

Physicians were commonly depicted wearing a gown and holding a urine flask or taking a patient's pulse. On this woodcut both are illustrated, together with two important animal symbols, the dog and the cat. In ancient times, the dog as a companion of Aesculapius was famous for healing. Later physicians treated liver injuries by applying the warmth of a dying animal to the patient's wound.

No. 45.

46. Brunschwig, Hieronymus, 1450-1512. Das Bůch der Wund Artzeny ... Strassburg, 1513.

The "Wound-man" shows the types of injuries that might be caused by weapons of the day. It is related to the old zodiacal diagrams, which combined an exposition of planetary influence with schemata of the viscera. In the sixteenth century the Wound-man was also a symbol of surgery.

47. Erasmus, Desiderius, d. 1536. Μωρίας ἐγκώμιον. Stultitiae laus. Des. Erasmi Rot. declamatio, cum commentariis Ger. Listrii, & figuris Jo. Holbenii ... Basel, 1676.

The representation of the physician with a urine flask became so general at the beginning of the sixteenth century that Hans Holbein the Younger made a caricature of it. Illustrating Erasmus' *The praise of folly,* he depicted the folly of medicine by placing a straw hat in the hand of the medical man instead of a urine flask.

48. Vesalius, Andreas, 1514-1564. De humani corporis fabrica...Basel, 1543.

This title page to the first edition of the *Fabrica* is one of the most celebrated and spectacular medical prints. The articulated skeleton in the middle distance symbolizes Vesalius' conviction that the study of anatomy should begin with bones. The naked figure indicates that the surface of the body also has anatomical importance. Galen's mistaken belief in the close similarity between human and animal anatomy is indicated by the dogs and the monkey. High in the center of the apse is the coat of arms of Vesalius supported by cupids representing medical students. Underneath the small title is a mask like those used by Greek actors, placed there to show that Vesalius wanted the subject of anatomy to be widely known. For the modern physician, the work of Vesalius symbolizes the introduction of modern methods of investigation.

49. Geiger, Malachias, 1606-1671. Microcosmus hypochondriacus; sive, De melancholia hypochondriaca tractatus ... Munich, 1652.

The salamander, sometimes shown as a crocodile, and generally hanging from the ceiling, was used to symbolize pharmacy, surgery and dentistry. A lizard-like animal, once presumed able to live in fire, it became an obscurely defined, mythical animal having the power to endure fire without harm. In medieval theories of elementals, especially as formulated by Agrippa von Nettesheim, the lizard was a

creature who inhabited the element fire.

50. Doläus, Johann, 1651-1707. Encyclopaedia chirurgica rationalis ... Frankfurt am Main, 1689.

This frontispiece presents all the tools of surgery, and in the left bottom corner, those of pharmacy. The real symbol of surgery is the nude woman, showing the surface of flesh, which is the material of the surgeon. The significance of Hermes' presence in this case is obscure.

51. Le Blanc, Louis. Nouvelle méthode d'opérer les hernies ... Paris, 1768.

In this engraving by the celebrated Hubert Gravelot, Amor presents a surgical instrument to a young woman holding a staff with the seeing hand, a symbol of surgery.

No. 51.

52. Disdier, François Michel, 1708-1781. Exposition exacte; ou, Tableaux anatomiques ... Paris, 1758.

At the top center is an emblem of surgery, a palm with an eye in the middle, representing the surgeon's seeing hand. Accompanying this, at left, is Apollo Citharoedus, the musician. According to myth, Apollo was a god of healing and of ceremonial purification, but he was also the sender and stayer of plagues and the agent of sudden death.

53. Brunschwig, Hieronymus, 1450-1512. Liber de arte distillandi de compositis ... Strassburg, 1512.

In this pharmacy of the late 15th century each drug container is marked by a symbol of the particular medicament it contains. The two emblems of eagles may represent the cooperation of medicine and pharmacy.

54. Pharmacopoeia augustana ... Augsburg, 1613.

At the top of the title page, which is engraved by Lucas Kilian, three women symbolize pharmacy. Between the statues of Solomon and

Mithridates two cupids are holding the pine or cedar cone, also a pharmaceutical symbol.

55. Pharmacopoeia augustana renovata et aucta ... Augsburg, 1684.

Pharmacy is usually symbolized by a young woman with the tools of pharmacy. Here the symbol of pharmacy is seated under a pine or cedar tree. The cone of the tree symbolizes health, life and fertility. The engraving is by Elias Hainzelmann.

56. Pharmacopoea Amstelaedamensis renovata. Amsterdam, 1726.

On the title page of the Pharmacopoea is a symbol of pharmacy used very often in the seventeenth and eighteenth centuries: a spatula with a serpent and medical herb. It is also the emblem of the Collegium Medicum of Amsterdam.

57. Fuchs, Leonhart, 1501-1566. Den nieuwen herbarius ... Basel, 1543.

On this portrait Fuchs holds a medical herb in his hand as a symbol of botanists.

No. 55.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service